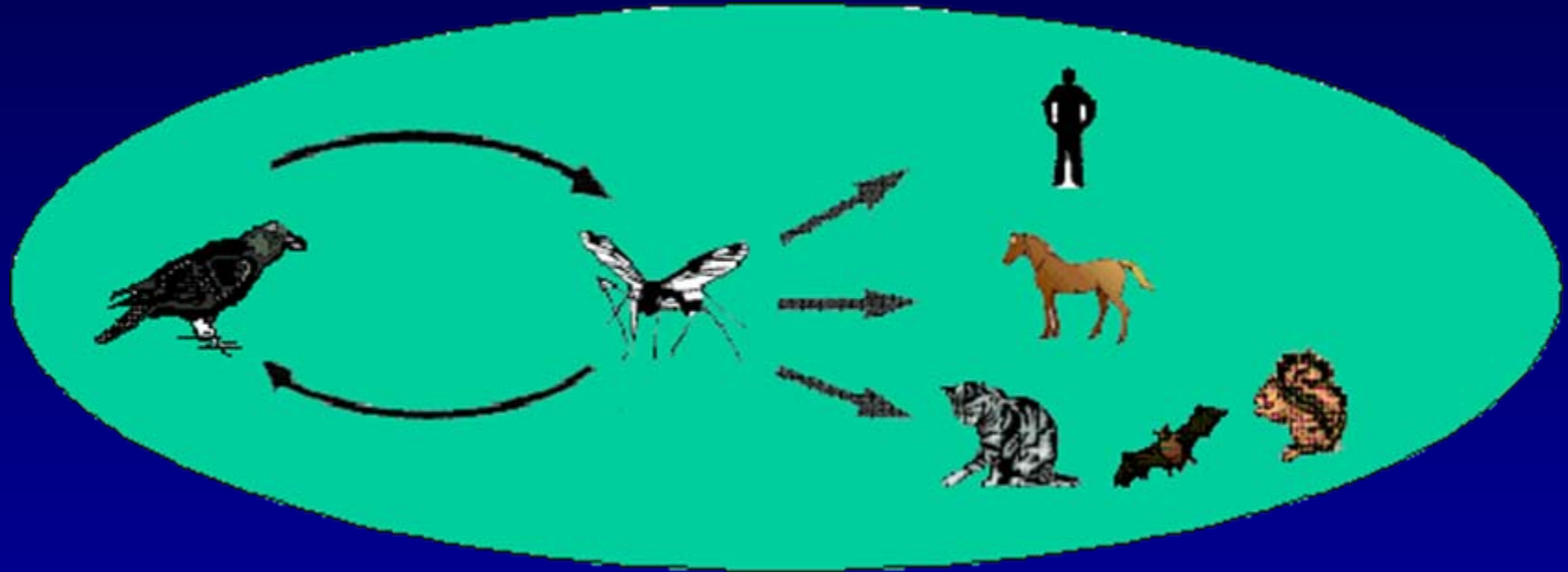


# 2007 West Nile Virus Update



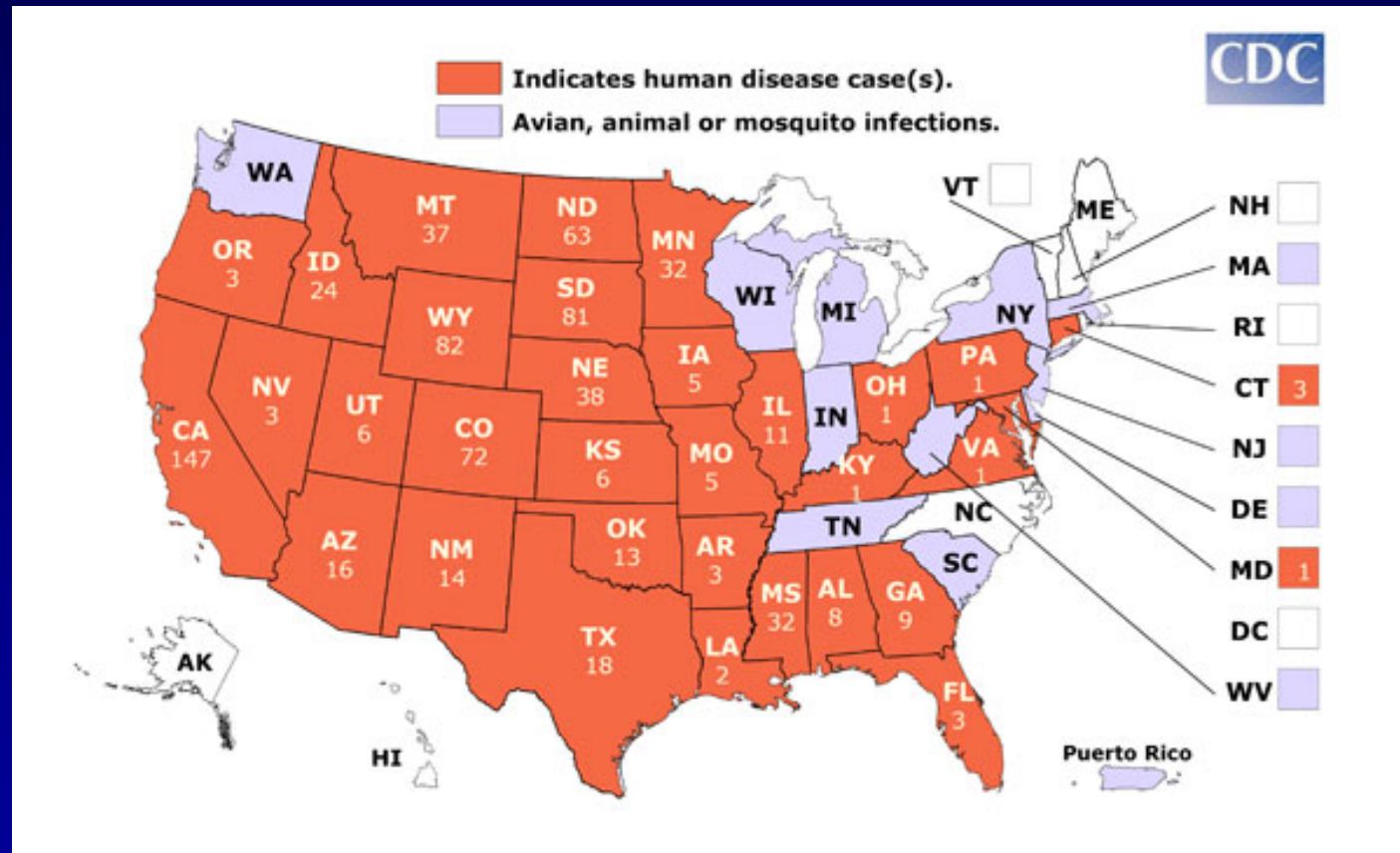
Mark G. Novak, Ph.D.  
CDPH, Vector-Borne Disease Section  
[mnovak@cdph.ca.gov](mailto:mnovak@cdph.ca.gov)



# National Update

## 2007 Incidence

WY	16.6
SD	10.7
ND	9.8
MT	4.1
NE	2.2
ID	1.9
CO	1.7
MS	1.1
NM	0.8
MN	0.7



Source: CDC (8/28/07)

# CDPH Role in Mosquito Control

- Provide program of vector biology and control (per HSC 116110)
- Oversight responsibilities for control
  - Sign Cooperative Agreements with local vector control agencies
  - Certification and continuing education for government agency pesticide applicators
  - Technical assistance to local agencies



# CDPH Role in Mosquito Control

- Coordinate statewide surveillance program (in collaboration with local agencies and UCD)
  - See: [www.westnile.ca.gov](http://www.westnile.ca.gov)
  - California Mosquito-borne Virus Surveillance and Response Plan
  - Operational Plan for Emergency Response to Mosquito-Borne Disease Outbreaks



# WNV Surveillance Program

1. Dead Bird Reporting/Testing
2. Sentinel Chicken Testing
3. Mosquito Testing
4. Encephalitis Case Surveillance
  - Human
  - Equine
  - Ratite (emus and ostriches)



# WNV Risk Assessment

Surveillance Factor

Benchmark

Categories Rated

1 to 5,  
totaled and  
averaged

Enviro conditions	Avg. daily temp
Mosquito population	Abundance
Mosquito infection rate	Infection Rate
Sentinel chicken seroconversions	Number in region
Dead birds	Number in region
Equine cases	Number in region
Human cases	Number in region
Proximity to urban/suburban areas	Virus detection

Response Levels:

Normal (1-2.5)

Emergency Planning  
(2.6-4.0)

Epidemic Conditions  
(4.1 – 5.0)

# January 2007


Humans, reported	0
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Horses, reported	0
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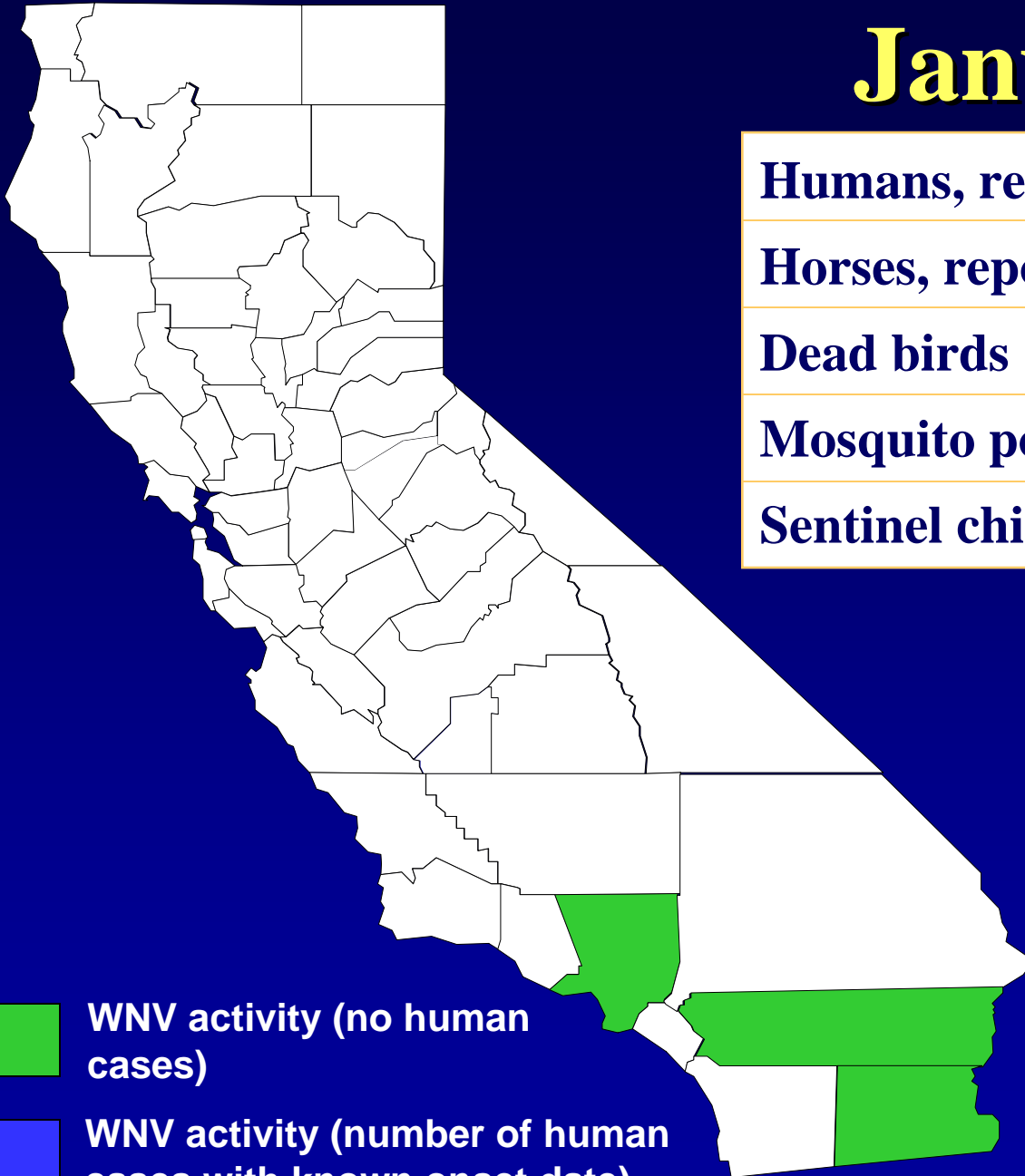
Dead birds	1
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Mosquito pools	2
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Sentinel chickens	1
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 WNV activity (no human cases)

 WNV activity (number of human cases with known onset date)



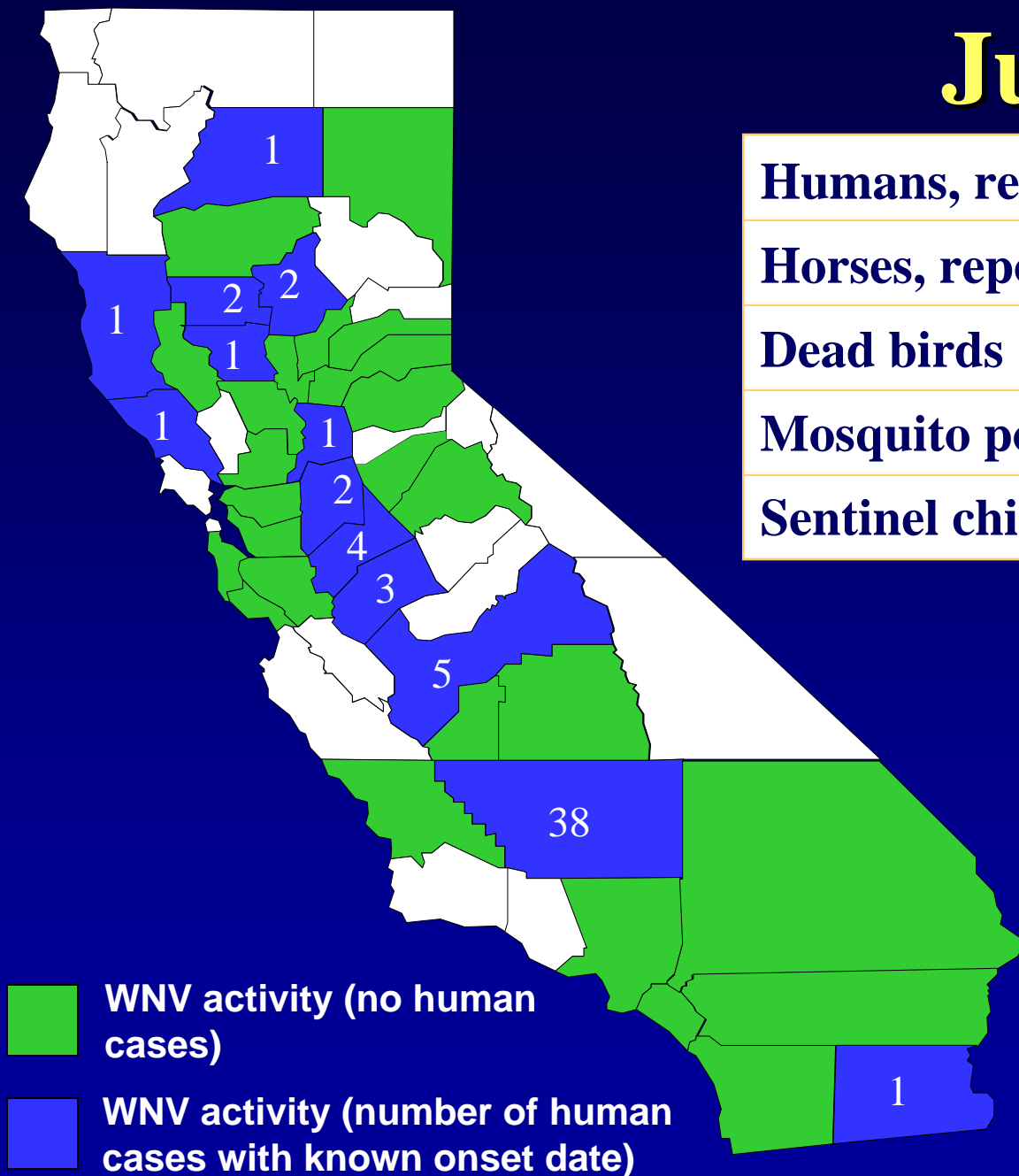
# June 2007

Humans, reported	1
Horses, reported	2
Dead birds	99
Mosquito pools	72
Sentinel chickens	4





# July 2007



Humans, reported	56
Horses, reported	5
Dead birds	423
Mosquito pools	317
Sentinel chickens	30

# August 2007

Humans, reported	172
------------------	-----

Horses, reported	18
------------------	----

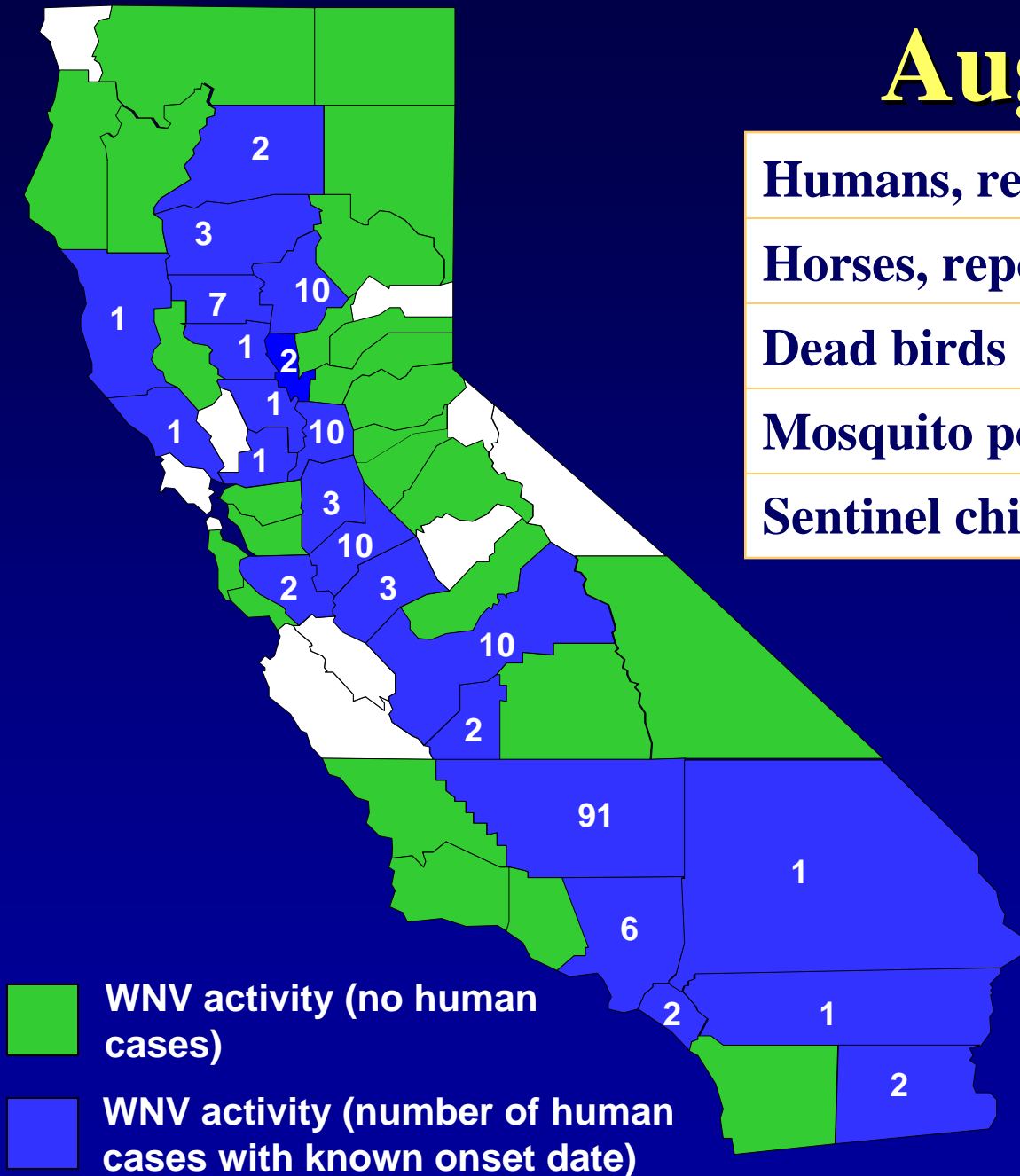
Dead birds	789
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Mosquito pools	761
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Sentinel chickens	194
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**N=23 Counties with  
Human Cases**

**2006 YTD = 138 Cases**



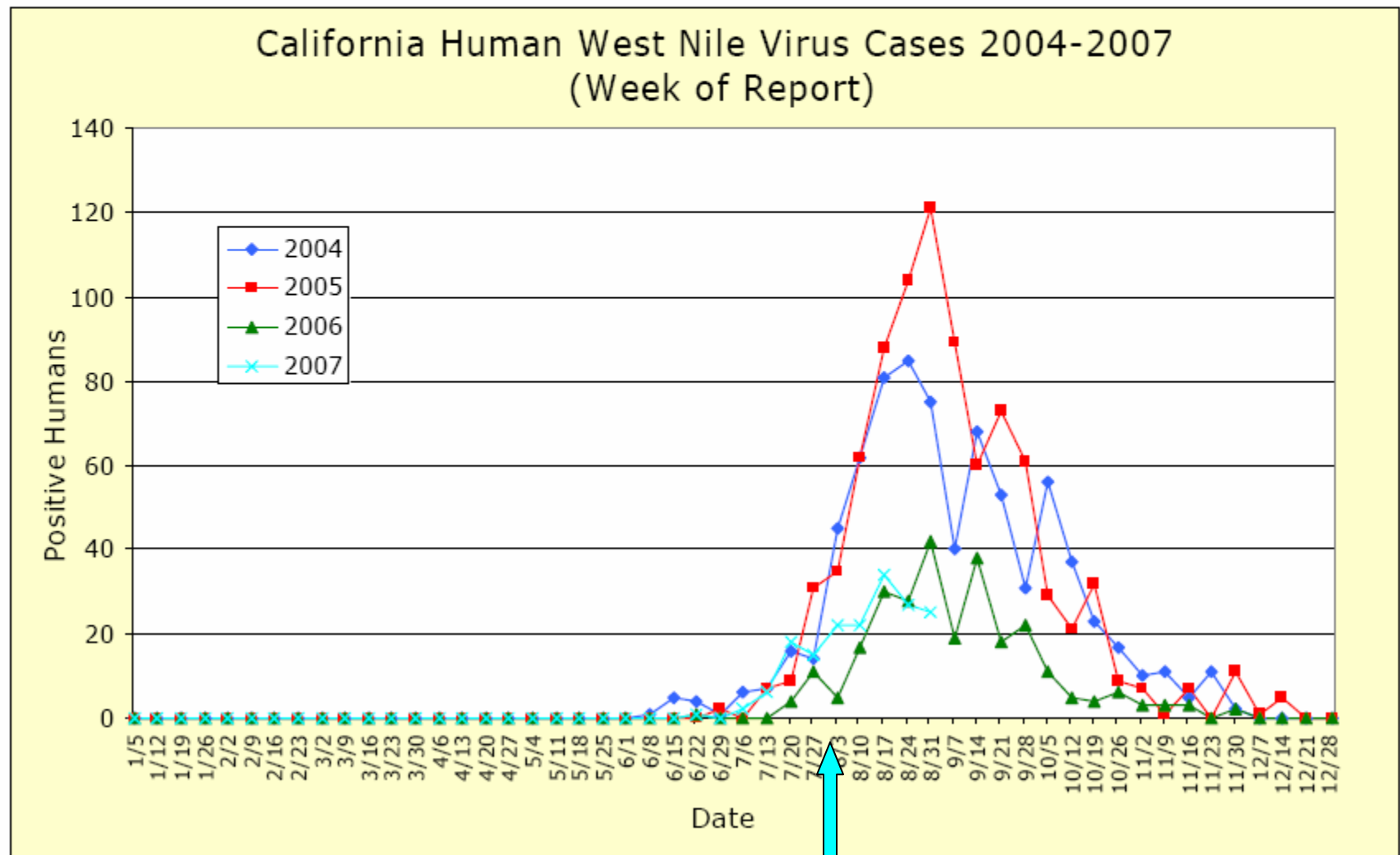
# 2007 Incidence (cases per 100k pop.)

Glenn	20.75
Kern	11.35
Tehama	4.86
Colusa	4.56
Butte	3.67
Sutter	2.13
Stanislaus	1.92
Kings	1.32
Merced	1.19
Imperial	1.16

as of 8/29/07

# Comparative Line Graphs of West Nile Virus Activity in 2004, 2005, 2006, and 2007

Updated (8/31/07)



# Human Case Comparison, 2004-07

Year	Thru July	Year total (fatalities)
2004	54	830 (28)
2005	56	928 (18)
2006	16	292 (7)
2007	56	172 (10) (as of 9/4)

# State Budget for WNV Control

- FY 05/06 Budget:
  - \$12 million to local vector control agencies to assist control efforts (i.e., personnel, equipment, chemicals)
- FY 06/07 Budget:
  - \$3 million to local agencies to assist control

# 2007 WNV Response Chronology

- OVERVIEW:

- Aug 2: Proclamation of a State of Emergency
- Aug 13: Executive Order providing Additional Funding for Surveillance and Control
- Aug 20: Executive Order providing funds for Best Management Practices on state owned wildlife wetlands

# Aug 2: State of Emergency Proclamation

- Kern, San Joaquin, Colusa counties
- Other high risk areas determined by CDPH
- Eleven Orders



# Emergency Orders 1 & 2

- Order 1:
  - CDPH to allocate up to \$1 million to local vector control agencies for abatement activities
- Order 2:
  - CDPH to allocate up to \$350K to local vector control agencies for surveillance activities

# Emergency & Executive Order Response

- Aug 2: State of Emergency Proclamation (\$1.35 mill)
  - Aug 7: \$453,000 released to vector control agencies in Kern, San Joaquin, Colusa and Glenn Counties
  - Aug 10: Additional \$897,000 released to 28 vector control agencies in 22 counties for surveillance and control activities
- Aug 13: Executive Order providing up to \$10 million in additional emergency relief for local mosquito control agencies
  - Aug 13: \$562,000 released to 20 agencies (17 counties)
  - Aug 22: \$1.4 million released to 22 agencies (15 counties)
  - Aug 30: \$347,000 released to 6 agencies (6 counties)

# Emergency Proclamation: Order 3

- CDPH to coordinate with:
  - State and Consumer Services Agency
  - Resources Agency
  - Department of Food and Agriculture
- Develop Plan for BMP for detection and control of WNV on state-owned properties
- Up to \$150,000 available for planning

# CDPH Response to Order 3

- Identified contacts at Agencies and DFA
- Collated existing BMP resources:
  - Storm water retention devices
  - Wetlands – natural and manmade
- Proposed funding mitigation efforts on state-owned wetlands

# Executive Order – Aug 20

- Provides up to \$500,000 to DFG for BMPs in State managed wetland wildlife areas most at risk for WNV
- CDPH Response:
  - Aug 22: \$100,000 released to 5 wildlife areas in 5 counties
  - Aug 30: remaining \$400,000 released to these and 3 others (3 additional counties)

# Emergency Proclamation Order 4

- CDPH and Department of Food and Agriculture work with Mosquito Research Program at UCD
  - Determine resources needed to further advance the research on the ecology and epidemiology of West Nile virus

# Emergency Order 4 Response

- Proposal in Progress:
  - Recommend funding allocated to CDPH and to establish contracts with UCD Center for Vector-borne Diseases and UC Mosquito Research Program

# Emergency Order 5

- CDPH to work with local vector control agencies and Business, Transportation and Housing Agency (BTHA) and local public health Departments to:
  - Inspect and abate public nuisances
  - Special emphasis on “green pools” and other standing water on vacant property

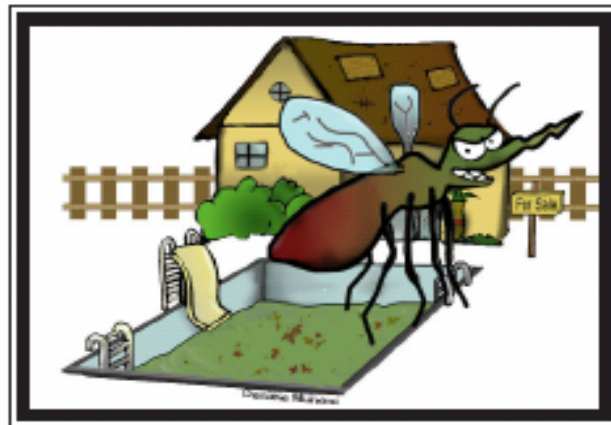


# Order 5 Response

- Developed “green pool” information sheet
- Developed Q and A for public agencies on mosquito management strategies for vacant properties
- Identified appropriate BTHA contacts who:
  - Identified local contacts and stakeholder groups
  - Disseminated information and posted on website ([www.corp.ca.gov](http://www.corp.ca.gov))

# Order 5 Response

## **WANTED** LOCATIONS OF NEGLECTED SWIMMING POOLS ALIAS: “**GREEN**” POOLS



**DEPRESSED HOUSING MARKETS AND FORECLOSURES HAVE LED TO  
MANY NEGLECTED OR “GREEN” SWIMMING POOLS IN CALIFORNIA.**

- Pools that are not maintained grow algae and bacteria, leading to “green” swimming pools.
- Mosquitoes lay their eggs in “green” pools. These eggs hatch into larvae that become adult mosquitoes.
- Mosquitoes from “green” pools can transmit WNV once they feed on an infected bird.
- These WNV-infected mosquitoes can bite you and infect you with WNV!

**WHAT DO I DO IF I HAVE, OR SOMEONE I KNOW HAS, A “GREEN” POOL?**

## **Spectrum Brands Responds to Gov. Schwarzenegger's Declaration of West Nile Virus State of Emergency**

### ***Company Donates Nearly 1 Million Repellent Wipes to California Agencies***

ESS WIRE)--Spectrum Brands wants Californians to have two fewer worries this Labor Day weekend — mosquitoes and the West Nile virus (WNV). Following Gov. Arnold Schwarzenegger's declaration of a state of emergency to prevent the spread of WNV in Colusa, Kern, San Joaquin, and Glenn counties — the areas hit hardest by the virus — the company is donating mosquito-repellent products to local agencies, as well as the Sacramento-Yolo Mosquito and Vector Control District.

According to the California WNV Web site (<http://www.westnile.ca.gov>), as of Aug. 27, there have been eight deaths this year in California because of the virus — three in Kern County and one in Colusa, Los Angeles and San Joaquin counties. This is three times higher than the same time last year.

On Friday, Aug. 30 and 31, residents of Kern, San Joaquin and Glenn Counties, can receive Cutter insect repellent wipes for free at local agencies. Wipes will be available for the rest of the week through Friday. The products will continue to be handed out until quantities are exhausted.

"We make this donation, and believe this is especially timely as people prepare to take advantage of nice weather this holiday weekend," said Gary Ramey, divisional vice president of Spectrum Brands. "We know to protect themselves from sun exposure and dehydration, but in places such as California, we're seeing another danger that should be of concern — mosquitoes. Repellent should be the first line of defense."

In response to the West Nile virus emergency with insecticide spraying of public areas. However, despite the dangers of mosquito bites, only 40 percent of adults use repellent, according to agencies surveys. In one minute or less, people can protect themselves from mosquitoes, ticks, biting flies, and other insects by applying a repellent with an active ingredient. The Centers for Disease Control. In addition to DEET-based insect repellents, the CDC also recommends using repellents with Picaridin, like Spectrum Brands' Cutter® Advanced™ Insect Repellent. Eucalyptus, which is marketed as Cutter® Oil of Lemon Eucalyptus Insect Repellent.

"When choosing a repellent, look for the active ingredient and the percentage of that active ingredient to know how many hours of protection the repellent will provide. The most important thing is to use it properly — going to use — and then use it."

The insect repellent wipes that are being donated by Spectrum Brands are 7.15 percent DEET and, in accordance with the CDC recommendation, can be used on adults, children, and older.

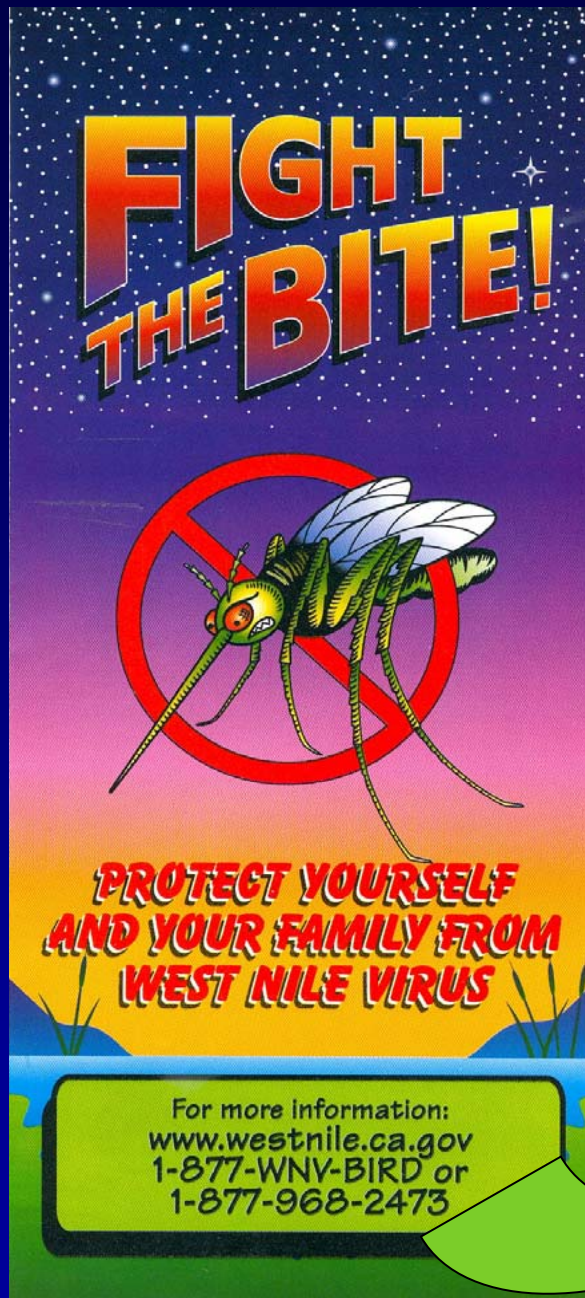
To reduce mosquito activity, Conlon also suggests inspecting door and window screens to prevent mosquitoes from entering a home; using outdoor foggers and lawn sprays to kill mosquitoes; and removing standing water in birdbaths, flowerpots, pool covers, and other places water collects.

The wipes will be available, at no cost, at the following agencies:

Department of Health and Human Services, Public Health Office

Hours: Monday thru Friday, 8 a.m. to 4:30 p.m.

Department of Health Services, Public Health Office



# QUESTIONS?

**Report Dead Birds:**  
**1-877-WNV-BIRD**

**[www.westnile.ca.gov](http://www.westnile.ca.gov)**